

# APPENDIX 1: VITAMIN D RESPONSE ELEMENT RESPONSIVE GENES AND RETINOIC ACID

## RESPONSE ELEMENT RESPONSIVE GENES

	<i>Accession Number</i>	
	Human	Mouse
<i>Vitamin D target genes (Vitamin D Response Elements)</i>		
a3-integrin	XM 008431	NM 013565
b3-integrin	XM 012636	NM 016780
c-fos	AF111167	-
CYP24c1/waf1	U 03106	U 24173
vitamin D receptor	NM 000376	NM 009504
<i>Retinoic acid target genes (Retinoic Acid Response Element)</i>		
eNOS (nitric oxide synthase)	-	-
iNOS (nitric oxide synthase)	AF 049656	NM 010927
platelet-activating factor receptor, human (PAFR)	XM 001857	-
(cDNA encoding a putative DNA-binding protein of the (PTB) domain-contain protein		
(t-PA) transcription of the human tissue-type plasminogen activator gene	M 15518	NM 008872
Oct:3	AB 011082	-
Oct:4	AB 010438	-
2a	AF 178948	-
2b	AF 179896	-
2c	AF 179897	-
2d	AF 179898	-
2e	AF 179899	-
71 Numb (membrane-associated, phosphotyrosine binding- Acetylated low density lipoprotein	AF 015040	U 70674
Acetylcholine (Ach)	-	-
ACS (acyl-CoA synthetase)	-	-
Acyl-coenzyme A: cholesterol acyltransferase-1 (ACAT-1) protein	NM 003101	-
ADD1 (a basic helix-loop-helix leucine zipper-type transcription factor)	XM 003404	NM 013457
Adipsin	XM 009262	NM 013459
AFP (alpha-fetoprotein)	NM 002777	NM 011178
Albumin	NM 000477	-
aldoketoreductase family1, member C1 (HAKRe)	NM 030611	-
Alpha (8)-integrin	XM 042813	-

10055239-000700

Alpha 1 (I) procollagen	NM000088	-
Alpha 1,3 GT (UDP-Gal:beta-D-Gal alpha1,3-galactosyltransferase)	-	-
Alpha Fetoprotein (AFP)	XM 031318	AH 001842
alpha form	XM 034737	NM 011101
AML 2, a member of the acute myelogenous leukemia		
Androgen-binding protein (ABP)	-	U85644
Annexin VIII	M 81844	NM 013473
AP 2 alpha	NM 003220	
AP-2 gamma	-	BC 0037798
Apolipoprotein AI	XM 052108	NM 009692
Apolipoprotein CIII	XM 052117	-
Apolipoprotein D (apo D)	XM 003067	NM 007470
Apolipoprotein(a) Apo(a)	BC 005380	X 64262
Aryl hydrocarbon receptor	XM 004988	AF 325111
ATP-binding cassette transporter 1 (ABC1)	NM 005502	NM 013454
B cell CLL lymphoma (Bcl-2) variant alpha	NM 000633	M16506/L31532
B cell CLL lymphoma (Bcl-2) variant beta	NM 000657	AH 001858
b-myb	XM 11125	NM 009263
B94 (TNFalpha-induced protein 2)	NM 006291	NM 009396
Bcl2	-	-
Bdm-1	-	-
beta 1	XM 005297	NM 007843
Beta 1,4 galactosyltransferase gene	NM 001497	-
Beta 1-adrenergic receptor	XM 0005827	NM 007419
beta 2	XM 031794	NM 010030
Beta 2-integrin genes (CD18)	XM 004285	-
beta 3	-	NM 013756
beta 4	-	NM 019728
beta 5	-	AF 318068
beta form	XM 047186	NM 008855
Beta(1)-integrin subunit	-	NM 010330
Beta-2 microglobulin	NM 002350	M 57696
Beta-amyloid precursor protein (beta APP)	NM 000484	NM 007471
Beta-galactoside-binding lectin (14K type)	X 14829	U 55060
biglycan	XM 010384	NM 007542
Bmp-2	AF 040249	NM 007553
Bone morphogenic protein (BMP-7)	XM 012943	NM 007557
Bone morphogenic protein 2	XM 009629	NM 007553
Bone morphogenic protein 4	XM 051690	XNM 007554
BP (a secreted binding protein for fibroblast growth factors)	-	-
Brn-3.2 (homology of mammalian POU gene)	XM 003736	NM 011938

C-erbB-2	AH 001455	-
C-erbB-3	AH 009647	
C-fos	K 00650	V 00727
C-Jun	-	-
C-kit (receptor tyrosin kinase)	X 06182	Y 00864
C-myc	XM 015267	NM 011146
C/EBP epsilon	-	-
caesin kinase II alpha subunit	X 69951	-
caesin kinase II beta subunit	-	X 56502
Calbindin (28K)	XM 005308	NM 009788
Carbonic anhydrase II gene	XM 045077	NM 009801
Cartilage-derived retinoic acid-sensitive protein (CD-RAP)	-	NM 019394
Cathespain-L	XM 041601	NM 009984
CD14	NM 005529	NM 008305
CD23	XM 006302	-
CD34 (leukosialin, sialophorin)	XM 002007	U49383
CD38 antigene	XM 007650	NM 009735
CD43 (leukosialin, sialophorin, GL115)	XM 018290	NM 009259
Cek-8 (Eoh-related receptor tyrosine kinase gene)	-	-
CerbB-4/HER4	-	-
Ceruloplasmin (ferroxidase)	XM 051423	NM 007752
ChAT (choline acetyltransferase)	XM 0011847	-
Chondromodulin-I	-	-
chorionic gonadotrophin hormone	-	-
Chromogranin B	XM 009625	NM 007694
Collagenase-1 (matrix metalloproteinase-1 (MMP-1)	XM 006270	-
collagenase-3	XM 006274	NM 008607
Connexin 43	XM 027460	-
Cornifin (small proline rich protein 1B/SPRR1B)	XM 048112	NM 009265
COUP-TFI	XM 003879	NM 010151
COUP-TFII	NM 021005	NM 009697
CRBP II (cellular retinol-binding protein type II	U 13831	X 74154
CRIPTO	AF 312925	NM 007685
Cyclin D1	M 64349	-
Cyclin D1	NM 001758	NM 007631
Cyclin D2	AH 002631	
Cyclin D3	M 92287	
Cyclin D3	XM 036381	NM 007632
Cyclin-dependent kinase 3(Cdk3)	XM 008130	-
Cyclooxygenase-2 (Cox-2)	XM 001734	NM 011198
CYP19 (produce aromatase P450)	XM 007568	NM 007810
DEAD box protein p72	U 59321	-
Decorin	XM 0112239	NM 007833
Defensin		
delta form	XM 003106	NM 011103

Dopamin D2	-	-
Dual specificity tyrosine (Y) phosphorylation regulated kinase 4 (DYRK4)	XM 034551	-
E3	-	-
Early growth response 1 (EGR1)	NM 001964	NM 007913
Early retinoic acid transcript-1 alpha (Era-1)	-	NM 009016
Early retinoic acid transcript-1 beta (Era-1)	-	NM 009017
Early retinoic acid transcript-1 gamma (Era-1)	-	NM 009018
EC1	-	-
Elastin	XM 004897	NM 007925
Embigin	XM 004063	AH 003568
Endolyn (CD164)	AF 263279	AF 299345
Engrailed 1	XM 002479	NM 010133
Engrailed 2	XM 001427	NM 010134
eosinophil major protein 2 (MBP2)	-	AF 202533
EphrinB1 receptor tyrosine kinase ligand	-	-
epidermal growth factor receptor	-	NM 007912
Epithelin	-	-
epsilon form	XM 010814	NM 011104
Ets 1	XM 009073	X 53953
Eukaryotic elongation factor alpha 1(EF-1 alpha)	NM 001402	XM 009445
Eukaryotic elongation factor alpha 2(EF-1 alpha)	-	NM 007906
Evel (an even-skipped gene)	-	-
Evx2 (an even-skipped gene)	AH 002690	-
F52/MacMARCKs	-	X61399
FABP5 (psoriasis-associated fatty acid-binding protein)	XM 002542	NM 008275
FATP-1 (fatty acid transport protein)	-	NM 011977
Fgf-3	-	NM 008007
Fgf4	XM 012011	NM 010202
Fibroblast growth factor-4 (Fgf-4)	-	U 43515
Fibroblast growth factor-8 (Fgf-8)	NM 006119	Z 48746
Fibronectin		
FPR1 (formyl peptide receptor1)	XM 009375	NM 013521
Fra-1	-	-
Fructose-1,6-bisphosphatase (FBPase)	AH 006619	-
Galectin-1	XM 009971	NM 008495
Galectin-1 (gal-1) a galactoside-binding protein	XM 038715	NM 008495
Galectin-3	XM 007333	-
GATA-4	NM 002052	NM 008092
Gb110	NM020963	X 75819
Gbx1	-	-
GDAP1 (ganglioside-induced differentiation-associated protein 1)	XM 005273	NM 010267
GDAP10 (ganglioside-induced differentiation-associated protein 10)	-	NM 010268
gelatinase A	BC 002576	-
gelatinase B	BC 006093	X 72795

Gelatinase B (MMP-9)	XM 009491	NM 013599
Gene 33 (Mig-6)	XM 010612	-
Ghox-7 (chicken homeobox-containing gene)	-	-
Glial cell line-derived neurotrophic factor (GDNF)	NM 000514	NM 010275
Glucose transporter protein type 3 (GLUT 3)	-	X 69698
Gont 1 (a Notochord family homeobox gene)	-	-
Goosecoid	XM 009832	NM 010351
GPRK6 (G-protein-coupled receptor kinase)	NM 001444	NM 010634
GPT (UDP-N-acetylglucosamine:dolichyl-phosphate-	XM 051420	-
Gpx2 (encoding selenium-dependent glutathione peroxidase)	AF 199441	U 62658
GRIM-19 (retinoid-interferon-induced mortality-19)	AF 286697	AF 286698
Gs alpha (a subunit of the stimulatory coupling protein of	-	-
adenylate cyclase)	-	-
H1	XM011804	-
H2	XM005512	-
H218 (guanine nucleotide-binding protein (G-protein)-coupled	-	-
receptor	-	-
HAIR-62 (Hoxal regulated-62)	-	-
HBNF (heparin-binding neurite-promoting factor)	NM 002825	-
HBV (human hepatitis B virus)	X 74497	-
hck	-	-
Heat stable antigen	-	X 53825
Heparin-binding EGF like growth factor (HB-EGF)	-	AH 006539
hepatic nuclear factor 1 (HNF1)	XM 012120	-
hepatic nuclear factor 4 (HNF4)	XM 029795	-
HMG(Y)	XM 004327	-
HNF-3alpha (hepatocyte nuclear factor-2alpha)	XM 007300	-
Homeobox B2 (HOX B2)	NM 002145	-
Homeobox D4 (HOXD4)	XM 042818	NM 014621
Homo sapiens dipeptidylpeptidase IV (DPP4/CD26)	XM 002211	NM 010074
Hox 3D	-	-
Hox a 5	NM 000612	NM 010514
Hox A1	NM 005522	-
Hox b-5	NM 002147	NM 008268
Hox D13	NM 003239	NM 009368
Hox-4.2 (Homolog to human HOX4B)	-	-
Hoxa4	XM 004917	-
Hoxb-8	-	-
HSD17B1 (17 beta-hydroxysteroid dehydrogenases)	XM 012644	NM 010475
HSP90	-	-
HuD (RNA binding protein)	-	D 31953
Human 1,25-dihydroxyvitamin D3 receptor (hVDR)	NM 000376	NM 009504
Human A1 (a Bcl-2 homologue)	-	-
Human BRE gene (brain and reproductive organs gene)	AF 015767	-
Human growth-differentiation factor 3 (hGDF3)	XM 006615	-

Human retinal fascin gene (FSCN2)	-	-
ICAM-1 (human intercellular adhesion molecule-1)	NM 000201	AH 001921
IDE (insulin-degrading enzyme)	XM 005890	NM 031156
IGF II (insulin-like growth factor II)	XM 011971	-
IGFBP insulin-like growth factor-binding protein 6	XM 012161	NM 008344
IGFBP-3 (insulin-like growth factor binding protein 3)	X64875	NM 008343
IGFBP-5 (insulin-like growth factor binding protein 5)	NM 000599	NM 010518
IL-15 (interleukin-15)	XM 003529	NM 008357
Importin alpha 1	-	-
Importin alpha 2	-	-
Importin alpha 3	XM 011015	NM 008466
Importin alpha 4	XM 007195	NM 008467
Importin alpha 5	XM 032659	-
Importin alpha 6	XM 004308	NM 008468
Importin alpha 7	XM 034510	-
Inositol triphosphate (InoP3)	-	-
Int-2	XM 002498	-
Interacellular fibronectin (FN)	M 10905	-
interferon-gamma	XM 052526	-
interstitial collagenase	XM 006270	-
Involucrin	XM 001677	NM 008412
j-acetylglucosamine-1 phosphate transferase		
J6 (a heat shock protein)	XM 017384	NM 010810
JEM-1	XM 001573	-
Jun N-terminal kinase 1 (JNKK1)	U 17743	-
Jun N-terminal kinase 2 (JNKK2)	AF 022805	-
Krox-24	-	-
KS:CS-PG (large keratan sulfate/chondroitin-	-	-
Lactate dehydrogenase B	XM 050073	NM 008492
Laminin		
Lefty-1	-	AJ000082
Leptin	NM 000230	NM 008493
leptin	XM 045426	NM 008493
Leukocyte adherence protein beta subunit	-	-
Low-affinity nerve growth factor receptor	-	-
Low-affinity nerve growth factor receptor (LNGFR)	XM 016142	-
Lyna	XM 009806	NM 008404
Lynb	XM 009539	NM 010407
Lysozyme	XM 006858	NM 017372
Mac 25		
Malic enzyme 1	-	-
Malic enzyme 2	XM 003593	NM 007646

Malic enzyme 3	XM 004367	-
MAPK (mitogen-activated protein kinase)	-	-
matrilysin 1 (MMP7)	NM 006206	M 84607
matrilysin 2 (MMP26)	X 13293	X 70472
mDab2 (mouse disabled 2)	AF 071062	-
Meis 1	X 14445	Y 00848
Meis 2 (homeobox gene)		L 157343
MEK	-	-
Mel1/EAT	L02533	-
Membrane-spanning mucin ASGP(Muc4)	XM 010936	AF161256
MGP (Matrix Gla protein) vitamin K dependent	XM 006585	-
MHC class I (major histocompatibility complex)		M 57697
Microfibril-associated glycoprotein 2	NM 003480	-
Midkine (neurite growth promoting factor 2)	XM 006297	NM 010784
MK gene (embryonic cytokine gene)	-	-
Mouse TRH gene	NM 007117	NM 009426
MROR	-	S 82720
MRP-8 9migration inhibitory factor-related protein-8)	X 06234	-
MSMP-30	-	-
Mst-1	-	-
Msx 1	XM 003469	NM 010835
Msx 2	NM 002449	NM 013601
MT78 (homology to human thioredoxin)	-	-
MUC4 (mucin gene)	XM 010936	AF 296636
MUC8	U 14383	-
Mucin (Muc5AC)	AJ001403	L42292
Mucin 2 (MUC2) gene	NM 002457	AF 221746
Murine epididymal retinoic acid binding protein (mE-RABP)	-	NM 007947
Murine homolog of COUP-TF1	-	X 74134
Murine Hoxb-1	-	-
Murine Ptx (paired-like class of homeobox gene)	-	-
mWnt 8	-	-
Myeloblastin	AB 005999	U 43509
Myeloperoxidase gene (MPO)	XM 008160	NM 010824
MyoD1	-	-
Myogenin	-	NM 031189
N-bhh (newt homologue of Xenopus banded hedgehog)	-	-
N-myc	AF 320053	X 03919
N52	-	-
Ncx (Enx, hox11L1)	XM 035224	-
Nedd-1	-	D 10712
neural cell adhesion molecule 1 (NCAM1)	XM 041414	-
neural cell adhesion molecule 2 (NCAM2)	XM 009705	NM 010954

Neurofibromin 1	NM 000267	AH 002052
Neurofibromin 2	NM 000268	-
Neuronal cadherin (cadherin 2, type I)	XM 008776	NM 007664
Neuropeptide Y (NPY)	XM 004941	-
Neurturin (NTN)	NM004558	NM 008738
neutrophil collagenase	XM 006273	NM 008611
Newt connective tissue growth factor	-	-
Nm23-H1 (a metastasis suppressor gene)	X 75598	-
Notch 1	AF 308602	L 02613
Notch 2	NM 024408	D 32210
Notch 3	NM 000435	NM 008716
Novel retinal pigment epithelial gene (NORPEG)	NM 015577	-
Nucleophosmin/B23	XM 018324	NM 008722
NvKII (type II keratin)	-	-
Oct6 (octamer binding factor)	-	-
OPN (osteopontin)		
ornithine aminotransferase (OAT)	XM 043659	NM 016978
Osteocalcin (bone gamma-carboxyglutamate protein)	XM 002069	NM 031368
Otx 1	-	-
oxidized LDL receptor (LOX-1)	AF 035776	AF 303744
P21ras-GTP	-	-
P27 (cyclin-dependent kinase (cdk) inhibitor	AF 247551	U 09968
P300 (E1A-associated 300 KDa protein)	XM 010013	-
p38	-	-
P53	XM 043212	-
PACAP1 (pituitary adenylate cyclase activating peptide1)	XM 012740	NM 009625
PAF receptor (human platelet-activity factor)	D 10202	AF 004858
Patched	XM 005574	NM 008957
Pax 6	XM 010880	NM 010789
Pax-2 a	NM 003987	XM 011933
Pax-2 b	NM 000278	-
Pax-2 c	NM 003988	-
Pax-2 d	NM 003989	-
Pax-2 e	NM 003990	-
PDGF alpha receptor	L 19182	AB O12886
PEA3 (polyomavirus enhancer activator 3)	-	NM 008815
Perlecan	NM 002396	-
PGD 2 synthetase (prostaglandin D2 synthetase)	XM 003695	NM 010728
PGD2 synthetase (PGD-S)	-	-
Phosphoenolpyruvate carboxykinase (PPCK) mitochondrial	XM 007298	-
Phosphoenolpyruvate carboxykinase (PPCK) soluble	XM 009672	NM 011044
Phospholipase C beta 2	XM 007610	AF022802
Phospholipase C beta 3	XM 012108	NM 008874
placental lactogen hormone variant 1	NM 020991	-

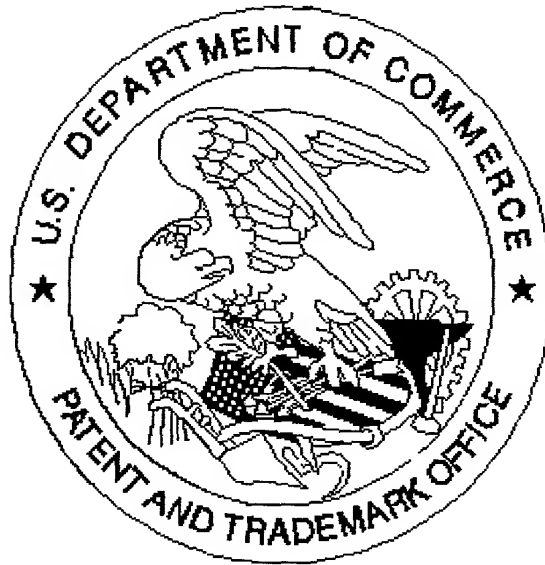


placental lactogen hormone variant 2	NM 022644	-
placental lactogen hormone variant 3	NM 022645	-
placental lactogen hormone variant 4	NM 022646	-
Platelet-derived growth factor-BB(PDGF-BB)	-	-
PPAR (peroxisome proliferator-activated receptor) alpha	NM 005036	X 89577
PPAR (peroxisome proliferator-activated receptor) delta	XM 010049	NM 011144
PPAR (peroxisome proliferator-activated receptor) gamma	NM 015869	U 01664
Prolactin gene (PRL)	XM 004269	NM 011164
ProT alpha (prothymosin alpha)	XM 009595	NM 009378
protein kinase C;		
Purkinje cell protein 2 (Pcp-2)	-	NM 008790
Pyruvate kinase	-	-
Rae28/mph1	-	U 63386
Raf	-	-
RAIG-2	-	-
RAIG-3	-	-
RALDH (retinal dehydrogenase II)	-	AF375057
RARP (poly (ADP-ribose) polymerase 1	XM 010732	NM 007415
RARP (poly (ADP-ribose) polymerase 2	NM 005484	NM 009632
RARP (poly (ADP<-ribose) polymer	NM 005485	-
Ras-like GTP-binding protein (Rad)	L 24564	AF 084466
Rat Ski oncogene	X 15218	-
RB1 (retinoblastoma tumor suppressor gene)	XM 007211	NM 009029
Relaxin (protein human)		
Retinoic acid 4-hydroxylase	-	-
rex-1	-	NM 009556
Rex-1 (Zfp-42)	-	AH 000847
RI-HB, an extracellular heparin binding protein	-	-
RIG-E	Z68179	-
Rry/lysyl oxidase	XM 006776	-
RZR (retinoid Z receptor beta)	-	-
SF1	U 76388	AF 220454
Shh	NM 000193	X76290
SHP-1, a cytosolic Src homology region 2 domain-containing PTP	-	-
SLPI (secretory leukocyte protease) inhibitor	XM 002542	NM 008275
Slug	XM 011634	-
Snydecin-1	NM 002690	NM 011519
SOX9	BC 007951	-
Sp110	AF 280095	-
Spermidine/spermine N-1-acetyltransferase	-	-
SPR1 (small, proline-rich gene) 1	XM 004565	U 66820
Src Suppressed C Kinase Substrate	-	-

StAR (steroidogenic acute regulatory gene)	U 17280	L 36062
STAT 1	XM 010893	NM 009283
Stathmin (LAP18)	-	S52658
Stoned B/TFIIA alpha/beta-like factor	XM 042828	-
Stra	-	-
Stromelysin 1	XM 006271	NM 010809
stromelysin 3 (MMP11)	XM 037675	NM 008606
sulfate proteoglycan core protein		
Surfactant B (SP-B)	XM 002565	-
Survivin (SVV)	U 75285	-
T3 receptor ( nuclear triiodothyronine receptor)	XM 006394	NM 010866
TAT (tyrosine aminotransferase)	XM 008081	-
Tau proteins	-	-
Tazarotene-induced gene 2 (TIG 2)	NM 002889	-
Tbx 5	XM 006833	AF140427
TCF17 (human homologue of the rat zinc finger gene 1)	NM 005649	NM 009329
Testicular transferrin	XM 039846	-
TGF-beta 3	-	-
Thrombomodulin	-	-
thrombomodulin (TM)	XM 009595	NM 009378
Thy-1	XM 006076	NM 009382
Thymosin beta 10	XM 002498	-
Thymosin beta 4b	-	X16053
Thymosin-beta-10	XM 002003	-
Thyroid hormone receptor alpha 1	X 55074	X 51983
Thyroid hormone receptor TR beta 2	XM 003822	NM 009841
TIMP1	XM 033879	-
TIMP2	XM 027036	NM 011594
TIMP3	XM 009943	NM 011595
TIMP4	XM 003061	AF 345865
Tissue factor (TF)	J 02846	M 57896
Tissue transglutaminase (TGM2)	AF 311286	AF 114266
Tissue-nonspecific alkaline phosphatase (TNAP)	-	-
Tissue-type plasminogen activator (t-PA)	XM 032501	NM 008872
Tr2-11 (orphan receptor)	M 29960	Y 11436
TR4(Human TR4 orphan receptor)	L27586	U32039
Transferrin	XM 002793	-
Transglutaminase -tissue type (TGM2)	AF 311286	NM 009373
Trk A receptor (NTRK1)	XM 010570	-
Trk B receptor (NTRK2)	NM 006180	NM 008745
TtT-97 thyroprotes	-	-
Type 1 GAP120	-	-
Type II collagen (Col2a1)	XM 038396	NM 031163

Type II human IMP dehydrogenase	-	-
Type X collagen (Col10A1)	NM 000493	X65121
UAS (upstream activator sequence)	XM 004918	NM 010453
Unc-33-like phosphoprotein gene (hULip)	Y07818	X87817
Uncoupling protein 1 (UCP 1)	NM 021833	NM 009463
Uncoupling protein 3 (UCP3)	U 84763	AB 010742
Uncoupling protein-2 (UCP2)	-	-
Urokinase-type plasminogen activator (uPA)	D 11143	NM 008873
Vacht (vesicular Ach transporter)	XM 005733	NM 021712
vasoactive intestinal peptide receptor 1 (VPAC1)	XM 003226	NM 011703
VCAM-1	X 53051	NM 011693
VCAM-1 (vascular cell adhesion molecule-1)	XM 001500	NM 011693
Vgr-2 (homology of transforming growth factor-beta superfamily)	-	-
Vimentin	XM 042952	NM 011701
VIP (neuropeptides vasocative intestinal peptide )	XM 004381	X 74297
VL 30 retrotransposons	?	?
Wnt 3a	-	X 56842
Wnt-1	XM 003498	NM 007423
Wnt-7a	-	M89801
XAG-2 (secreted cement glans protein XAG-2 homolog)	AF 03845	AF 044262
Xgbx-2 (homeobox gene)	-	-
Xgbx-2 (xenopus)	-	-
ZAN75 cDNA (codes for a DNA-binding protein)	-	AB 012725
zinc-finger type) high homology to orphan receptor Tr2-11		

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